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Essential Services Commission  
Level 37, 2 Lonsdale Street  
MELBOURNE VIC 3000

Via email: [DGInquiry@esc.vic.gov.au](mailto:DGInquiry@esc.vic.gov.au)

## **Re: True Value of Distributed Generation Inquiry – Stage 2 “Network Value” Draft Report**

### **To Whom It May Concern:**

Australian Gas Networks Limited (AGN) welcomes the opportunity to make a submission to the Essential Services Commission (the Commission) regarding its Draft Report (the Report) on the network value of distributed generation.

Natural gas is a low carbon energy choice for Victoria and delivers safe and reliable energy with significantly lower carbon intensity than electricity generated from coal. Additionally, the continued use of natural gas ensures a diversified and competitive energy mix in Australia, thereby increasing the security of supply to customers.

AGN has previously provided submissions in relation to the Commission's ongoing inquiry highlighting its support for the continued investigation into reducing the barriers to entry hindering the viability of distributed generators and the importance of ensuring any recommendations made by the Commission are technology neutral.

In its Draft Report, the Commission has asked for feedback on a number of aspects of determining the network value of distributed generation. AGN is pleased to provide comment on the appropriate principles to guide market development and the data and analysis that should be considered in assessing the environmental and social benefits of distributed generation (questions 2 and 5 respectively).<sup>1</sup>

### ***Question 2: What are the appropriate principles to guide the ongoing development of the market for grid services in Victoria, including any regulatory intervention that might be considered?***

As detailed in our response to the Commission's Discussion Paper, AGN is a strong supporter of technology neutral policy in market design. We consider that technology-neutrality as a policy principle is important because:

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<sup>1</sup> Essential Services Commission, "The Network Value of Distributed Generation: Distributed Generation Inquiry Stage 2 Draft Report", October 2016, pg. 122.

- It ensures market forces are able to determine the future energy mix, rather than government policy supporting the development of particular technologies; and
- It enables least cost carbon abatement for energy users as we move toward a low carbon future.

As the Queensland Productivity Commission (QPC) states in its "*Solar Feed-In Tariff Pricing in Queensland*" Issues Paper:

*"Policy frameworks typically include a principle that policies should be technologically neutral. The idea is that what is important is the quality and price of the service, not the specific platform, technology or approach to delivering the service. The focus is on the long-term interests of consumers and not the industry or the development of a specific technology."*<sup>2</sup>

We also consider that technology neutral policy ensures that the benefits of natural gas powered distributed generation are able to be achieved.

For example, cogeneration systems are a form of gas-powered distributed generation that use natural gas to produce electricity. These systems can provide strong customer benefits by lowering the cost and carbon intensity of electricity. For example, the Oasis Regional Aquatic Centre in Wagga Wagga installed a 229kW cogeneration system, which has reduced its electricity bill by over \$20,000 a month whilst also reducing greenhouse gas emissions by 945 tonnes.<sup>3</sup>

In December 2015, the Energy Networks Association (ENA) released a paper called "Australia's Bright Gas Future" (provided as Attachment A to this submission), in which it commented:

*"Using gas-fired embedded generation (or micro-turbines), gas can be converted into electricity to run buildings and supply power for electric vehicles at a fraction of the emissions levels of grid sourced electricity."*<sup>4</sup>

Additionally, the generation provided from gas can support the increased installation of renewable energies embedded in electricity networks. In particular, gas-powered generation can provide reliable baseload generation, when generation from renewables (such as wind or solar installations) is low. To this end, the ENA notes that:

*"The reliability, cost, physical footprint and availability of small scale gas generation systems suggest that these systems can support the integration of other alternative technologies into the electricity grid. Power systems that use cogen, trigen or microgen systems as backup have a number of benefits such as:*

- *Increased reliability of power supply no matter what the weather conditions;*
- *Efficient heating and cooling options due to capturing or otherwise wasted resources;*
- *Continuous fuel supply through reticulated infrastructure."*<sup>5</sup>

We also note that using gas to produce electricity can take considerable stress off of the electricity distribution system. This would therefore avoid costly investment in distribution networks required to meet peak electricity demand on only a few days of the year. As an example, one electricity network operator has indicated that augmentation of the network to

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<sup>2</sup> Queensland Productivity Commission, "*Issues Paper – Solar Feed-In Tariff Pricing in Queensland*", pg. 12.

<sup>3</sup> Energy Networks Association, "*Australia's Bright Gas Future*", December 2015, pg. 5.

<sup>4</sup> *Ibid.*, pg. 8.

<sup>5</sup> *Ibid.*

cater for peak demand cost approximately \$11 billion.<sup>6</sup> The greater penetration of cogeneration systems therefore has the benefit of reducing gas *and* electricity prices while lowering carbon emissions.

We are pleased that the Commission has taken a technology-neutral approach to defining distributed generation and encourage the Commission to apply similar principles to market design.<sup>7</sup>

**Question 5: *Is there additional data and analyses that the Commission should consider in assessing the environmental and social benefits of distributed generation in respect of electricity networks, specifically in terms of identifying, quantifying and valuing those benefits of distributed generation?***

We consider that in conjunction with assessing the true value of distributed generation in terms of the environmental and social benefits as specified in the Report<sup>8</sup>, there is also a need to consider and acknowledge the emissions reduction benefits of encouraging the uptake of distributed generation (and thereby increasing the use of lower emission gas-powered generation).

In particular, we note that natural gas networks have fewer losses (compared to electricity networks) as gas is transported from its source to customers and hence contributes less to greenhouse gas emissions. By increasing the use of natural gas in distributed energy sources (such as cogeneration facilities), the emissions generated from energy usage in Victoria will decrease.

### **Summary**

We consider that there is an important role for gas networks to play in relation to reducing both the cost and carbon emissions generated by electricity networks. We therefore encourage the Commission to review the attached ENA paper and would welcome further discussion with the Commission on this matter.

Please contact either Ashley Muldrew or myself if you would like to discuss the matters raised in this submission further.

Yours sincerely,



**Craig de Laine**  
**General Manager - Regulation**

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<sup>6</sup> *Ibid.*

<sup>7</sup> Essential Services Commission, "The Network Value of Distributed Generation: Distributed Generation Inquiry Stage 2 Draft Report", October 2016, pg. 12 defines distributed generation as "distributed electricity generation from any source or fuel type".

<sup>8</sup> *Ibid.*, pg. 18.